



FORMULA FOR FINDING C:

$$C = B + (2)(1.5) \left[ \frac{B}{2} + A + F \right]$$

PERPENDICULAR CROSSING CASING LENGTH ——— C

OD DENVER WATER CONDUIT ——— B

CONSTANT ——— (2)(1.5)

RATIO OF MIN SLOPE ——— 1.5

CASING OD ——— B

VERTICAL DISTANCE BETWEEN CASING AND DENVER WATER CONDUIT. ——— B

1/2 OD DENVER WATER CONDUIT ——— B/2

FORMULA FOR FINDING L:

$$L = \frac{C}{\sin \phi}$$

**NOTES:**

1. FINAL APPROVAL OF BORING AND CASING METHOD AND MATERIALS SHALL BE OBTAINED FROM THE ENGINEER PRIOR TO CONSTRUCTION.
2. SOIL AT ENDS OF CASING SHALL BE STABLE AT ALL TIMES.
3. CATHODIC PROTECTION SHALL BE PROVIDED FOR STEEL CASING AS REQUIRED BY THE ENGINEER.
4. CASING PIPE SHALL BE ONE PIECE, STRAIGHT, ROUND AND OF NEW MATERIAL.

<b>DENVER WATER</b> 1800 West 12th Avenue • Denver, Colorado 80204 Phone (303) 628-6000 • Telecopier No. (303) 628-6851			D
<b>BORED CROSSING BENEATH CONDUITS</b>			
Scale: <u>NONE</u>	Date: <u>JULY 1995</u>		
Drawn: <u>C.B.B.</u>	Tr: <u>    </u>	Ck: <u>    </u>	
Approved: <u>[Signature]</u>		Dr. <u>127</u> No. <u>35</u>	